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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(54) Title:** SANITARY NUTRITIOUS DRINK FOR DOGS

**(57) Abstract:** This application for an Invention Patent refers to a drink for dogs which, in addition to being a food supplement has a sanitary nature which breaks the biologic chain that contributes to the proliferation of various diseases produced by different larvae and particularly yellow fever and Dengue and its transmission vector, the *Aedes aegypti* mosquito. The invention also provides the same substance in powder form and also provides the processes for their preparation.

## SANITARY NUTRITIOUS DRINK FOR DOGS

The present invention refers to a drink for dogs which, in addition to being nutritious has a sanitary nature in that it breaks the biologic chain which contributes to the proliferation of various diseases produced by different larvae and particularly yellow fever and dengue and its transmission vector, the mosquito "*Aedes aegypti*".

The particular problem posed is the reproduction of mosquitoes and black flies in domestic animal troughs.

The food components have the purpose of providing pets with substances fundamental for their metabolism and general health.

In addition the drink includes flavoring to ensure its acceptance by dogs, as well as preservers or stabilizers to allow for reasonable periods of stagnation. To the aforesaid sanitary effects, the drink includes a non-toxic larvicide, all of these in adequate proportions and concentrations, using drinking water or a substitute acceptable for veterinary consumption and dechlorinated. In case the water used as solvent includes an excess of one substance or other, for example minerals, the water shall be previously treated.

In case of using drinking or softened water, the elements constituting the drink shall be added to those

presented by the solvent.<sup>2</sup> All the components of the drink for which protection is sought are detailed hereunder with the respective percentages and concentrations for one liter of solvent, including, in addition to the aforesaid components others the purpose of which in the drink are specified therein.

Vitamins and Minerals

Folic Acid	$7.5 \times 10^3$ mcg	$\pm 20 \%$
Phosphoric Acid 85%	10 mg	$\pm 10 \%$
Biotine	$1.5 \times 10^3$ mcg	$\pm 20 \%$
Calcium Carbonate	10 mg	$\pm 10 \%$
Magnesium Carbonate	20 mg	$\pm 20 \%$
Potassium Chloride	15 mg	$\pm 10 \%$
Sodium Chloride	$15 \times 10^3$ mg	$\pm 20 \%$
Cobalt	$0.25 \times 10^3$ mg	$\pm 20 \%$
Copper	$1 \times 10^3$ mg	$\pm 20 \%$
Coline	$8 \times 10^3$ mg	$\pm 20 \%$
D-Panthenol	$1 \times 10^3$ mg	$\pm 20 \%$
Iron	$5 \times 10^3$ mg	$\pm 20 \%$
Potassium Iodate	$0.1 \times 10^3$ mg	$\pm 20 \%$
Manganese	$0.75 \times 10^3$ mg	$\pm 20 \%$
Nicotinamide	$3 \times 10^3$ mg	$\pm 20 \%$
Sodium Selenite	$15 \times 10^3$ mcg	$\pm 20 \%$
Vitamin A	0.45 UI	$\pm 10 \%$

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Vitamin B1	$2.5 \times 10^3$ mg	$\pm 20 \%$
Vitamin B12	$2.5 \times 10^3$ mcg	$\pm 20 \%$
Vitamin B2	$1.5 \times 10^3$ mg	$\pm 20 \%$
Vitamin B6	$1 \times 10^3$ mg	$\pm 20 \%$
Vitamin C	25 mg	$\pm 10 \%$
Vitamin D3	0.1 UI	$\pm 20 \%$
Vitamin E	$2 \times 10^3$ mg	$\pm 20 \%$
Vitamin K3	$4.5 \times 10^3$ mg	$\pm 20 \%$
Zinc	$2 \times 10^3$ mg	$\pm 20 \%$

Preservers for the stabilization of the product

Nipagin	12.5 to 50 mg
Nipasol	12.5 to 50 mg
1,2 Benzisothiazoline	12.5 to 50 mg
Sorbic/Sorbate Buffer	300 to 750 mg
Sodium Benzoate	250 mg to 1 gr

- 5        These preservers may be used in combination, with exclusion of some of them, according to the environmental conditions of the place of application.

Amino acids

Lisine	$1.5 \times 10^3$ mg	$\pm 20 \%$
Methionine	$5 \times 10^3$ mg	$\pm 20 \%$

4

Sweeteners

Glycerin and/or Sorbitol	100 to 200 mg
Glucose and/or Fructose	2.25 to 10 gr

Permitted Coloring Agents

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Flavoring Agents

Apple, banana, kiwi, cherry, orange, lemon, grapefruit,  
cola, pineapple, carrot, vanilla, almond, cacao and cream

Biologic Larvicide

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VETOBAC-AS <sup>®</sup> Abbott Laboratories or similar	7.5 to 15 x 10 <sup>3</sup> cc	± 15 %
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Buffer

Citric/Citrate	Cs 4<pH>6.5
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15 Solvent (1 liter)

Drinking softened deionized Water
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The drink may be presented in liquid form for direct consumption or in powder for preparing it by adding the appropriate quantity of water.

5       The preparation of the liquid form consists in estimating the quantity of solvent (water) in accordance with the quantity of drink to be prepared and afterwards adding all the components either directly or previously diluted.

10       To prepare the powder, the component products are mixed and they dried by known methods, for example at low temperature by dehydration or equivalent methods.

Object

As it may be appreciated the canine drink is  
15 formulated to supplement especially dry food currently in commerce, therefore the vitamin and mineral levels have been adjusted to avoid overdose when added to the levels existing in dry food.

Small doses of glucose contribute a little but quick  
20 source of energy.

The level of sodium chloride has been reduced to the minimum. The formula incorporates a biologic larvicide, non toxic either for humans or animals. This larvicide

6  
prevents the reproduction of mosquitoes and black flies  
in troughs' water.

Differences with other formulas

This formula is characterized by small doses of  
5 minerals and vitamins which, added to those in dry food,  
do not cause intolerance in the animal organism.

The preservers doses have been balanced to maintain  
the level of *Bacillus thuringiensis* active and stable  
supported by microbiological tests, during 90 days, at  
10 least.

Problems that are solved

On the other hand, due to the preservers added to  
this novel drink, more stability of the formula is  
obtained, allowing consumers to maintain it in animal  
15 troughs for more time. At the same time, as *Bacillus*  
*thuringiensis* is included, the possibilities for Dengue  
and yellow fever to develop are inhibited.

## CLAIMS

1. A drink for dogs having nutritious and sanitary nature and comprising in one liter of drinkable dechlorinated and deionized solvent the following components,
- vitamins and minerals, whose expressed quantities can vary in the range of  $\pm 20\%$ : Folic Acid  $7.5 \times 10^3$  mcg, Biotine  $1.5 \times 10^3$  mcg, Magnesium Carbonate 20 mg, Sodium Chloride  $15 \times 10^3$  mg, Cobalt  $0.25 \times 10^3$  mg, Copper  $1 \times 10^3$  mg, Coline  $8 \times 10^3$  mg, D-Panthenol  $1 \times 10^3$ , Iron  $5 \times 10^3$  mg, Potassium Iodate  $0.1 \times 10^3$  mg, Manganese  $0.75 \times 10^3$  mg, Nicotinamide  $3 \times 10^3$  mg, Sodium Selenite  $15 \times 10^3$  mcg, Vitamin B1  $2.5 \times 10^3$  mg, Vitamin B12  $2.5 \times 10^3$  mcg, Vitamin B2  $1.5 \times 10^3$  mg, Vitamin B6  $1 \times 10^3$  mg, Vitamin D3 0.1 UI, Vitamin E  $2 \times 10^3$  mg, Vitamin K3  $4.5 \times 10^3$  mg, Zinc  $2 \times 10^3$  mg,
- vitamins and minerals, whose expressed quantities can vary in the range of  $\pm 10\%$ : Phosphoric Acid 85% 10 mg, Calcium Carbonate 10 mg, Potassium Chloride 15mg, Vitamin A 0.45 UI, Vitamin C 25 mg;
- preservers for the stabilization of the product: Nipagin 12.5 to 50 mg, Nipasol 12.5 to 50 mg, 1,2 Benzisothiazoline 12.5 to 50 mg, Sorbic/Sorbate Buffer 300 to 750 mg, Sodium Benzoate 250 mg to 1 gr, in which these preservers may be used in combination, with



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- exclusion of some of them, according to the environmental conditions of the place of application;
- amino acids, whose expressed quantities can vary in the range of  $\pm 20\%$ : Lisine  $1.5 \times 10^3$  mg, Methionine  $5 \times 10^3$  mg;
  - sweeteners: Glycerin and/or Sorbitol 100 to 200 mg, Glucose and/or Fructose 2.25 to 10 gr;
  - permitted Coloring Agents;
  - flavoring Agents: Apple, banana, kiwi, cherry, orange, lemon, grapefruit, cola, pineapple, carrot, vanilla, almond, cacao and cream;
  - biologic larvicide, whose expressed quantity can varies in the range of  $\pm 10\%$ : VETOBAC-AS® Abbott Laboratories or similar  $7.5$  to  $15 \times 10^3$  cc; and
  - buffer: Citric/Citrate Cs  $4 < \text{pH} < 6.5$ .

2. A drink according to claim 1, wherein the solvent is drinking water or a similar substitute acceptable for veterinary consumption and previously dechlorinated.

3. A drink according to the claim 1 or 2, wherein if the water used as solvent includes some substance in excess, like some mineral or other, the water is previously treated.

4. A powder preparation comprising all the components according to claim 1 excepting the solvent.

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5. A process for the preparation of a drink according to claims 1 to 3, wherein the quantity of solvent is estimated in accordance with the quantity of drink to be prepared and then adding to said quantity of solvent all the components either directly or previously and partially diluted.

6. A process for the preparation the product referred to in claims 1 to 4 to be provided in powder form wherein the component products are mixed and the mixture is then dried by known methods, for example at low temperature by dehydration or equivalent methods.

7. A product for dog consumption according to any of the preceding claims which can be provided in liquid form bottled in disposable or non disposable containers or in powder form packed in dry containers.

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>P02138/PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 03/03768</b>	International filing date (day/month/year) <b>11/04/2003</b>	(Earliest) Priority Date (day/month/year) <b>11/04/2002</b>
Applicant <b>TREDIN S.A.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**SANITARY NUTRITIOUS DRINK FOR DOGS**

INTERNATIONALER RECHERCHENBERICHT

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23K1/18 A23K1/16 A23K1/175 A01N63/00 A23K1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23K A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, FSTA, MEDLINE, BIOSIS, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 5 017 389 A (GREEN SCOTT T) 21 May 1991 (1991-05-21) column 1, line 10 - line 65 column 2, line 40 - line 48	1-7
	-/-	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

15 July 2003

Date of mailing of the international search report

30/07/2003

Name and mailing address of the ISA

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Smeets, D

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/US2005/004274

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